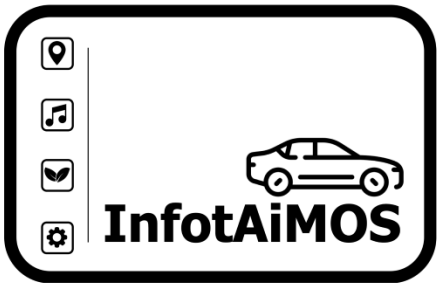
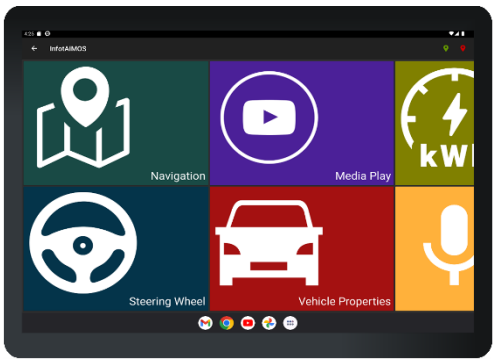
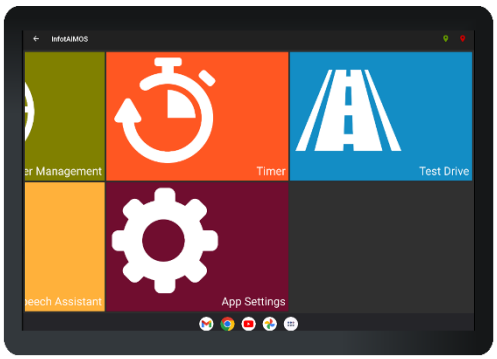
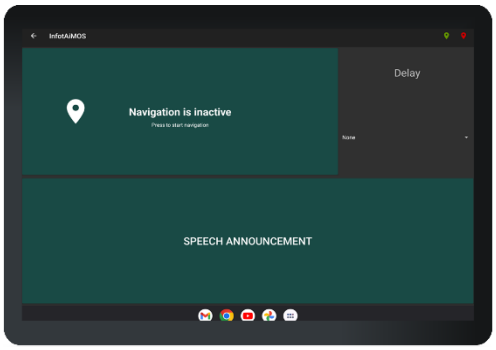
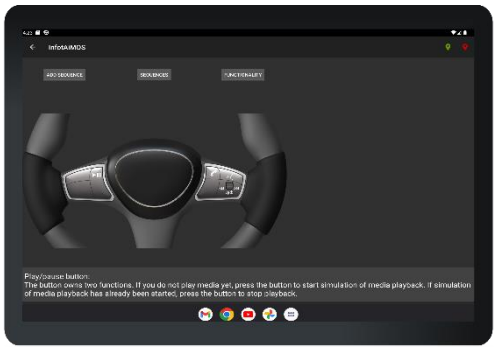
Project Summary

Project name	InfotAiMOS
Project mission	The mission of this project is to develop a functioning Android Automotive test app, that can help to test and simulate different use cases of infotainment systems immediately or with a time delay. It particularly focuses on the simulation of these use cases in the context of navigation, steering wheel knobs, vehicle properties, speech assistants, timers and test drives. This app should therefore, provide the developers with a test system in which apps can be tested in a safe environment.
Industry partner	e.solutions GmbH
Team logo	
Project summary	Over the last few years, the importance of infotainment systems in cars increased significantly and will continue to do so in the future. Since different car manufacturers use different infotainment systems and have different requirements for a newly developed app, testing these new infotainment apps is a challenge. Especially the interaction of a new app with other apps on an infotainment system can be time-consuming since all these other apps would need to be installed on the system beforehand. Therefore, we developed an app that can simulate different infotainment uses cases, so that there is no need to have other apps, that interact with the app under test, installed on a car. Testing new apps is thus made easier and less time consuming. To make the use cases easily accessible, we developed a landing page that shows six different use case areas and an area for in-app setting. These areas include use cases from navigation, e.g., starting and stopping a navigation, the steering wheel on which different buttons can be pressed, and a timer area in which the duration of different actions, e.g., starting an app, can be measured. Furthermore, there is an area for vehicle properties, which can be adjusted as needed, as well as an area for push-to-talk and tap-to-talk speech assistants. Lastly, there is an area for test drives. Here a test drive, and all events that occur during that drive, can be recorded and exported afterwards in order to facilitate debugging in case of unintended behavior and/or system crashes. Our app is an OpenSource app built on the operating system Android Automotive and was coded in the programming language Kotlin.

Project illustration	   
Project repository	https://github.com/amosproj/amos2022ws02-automotive-test-app